COOKIA

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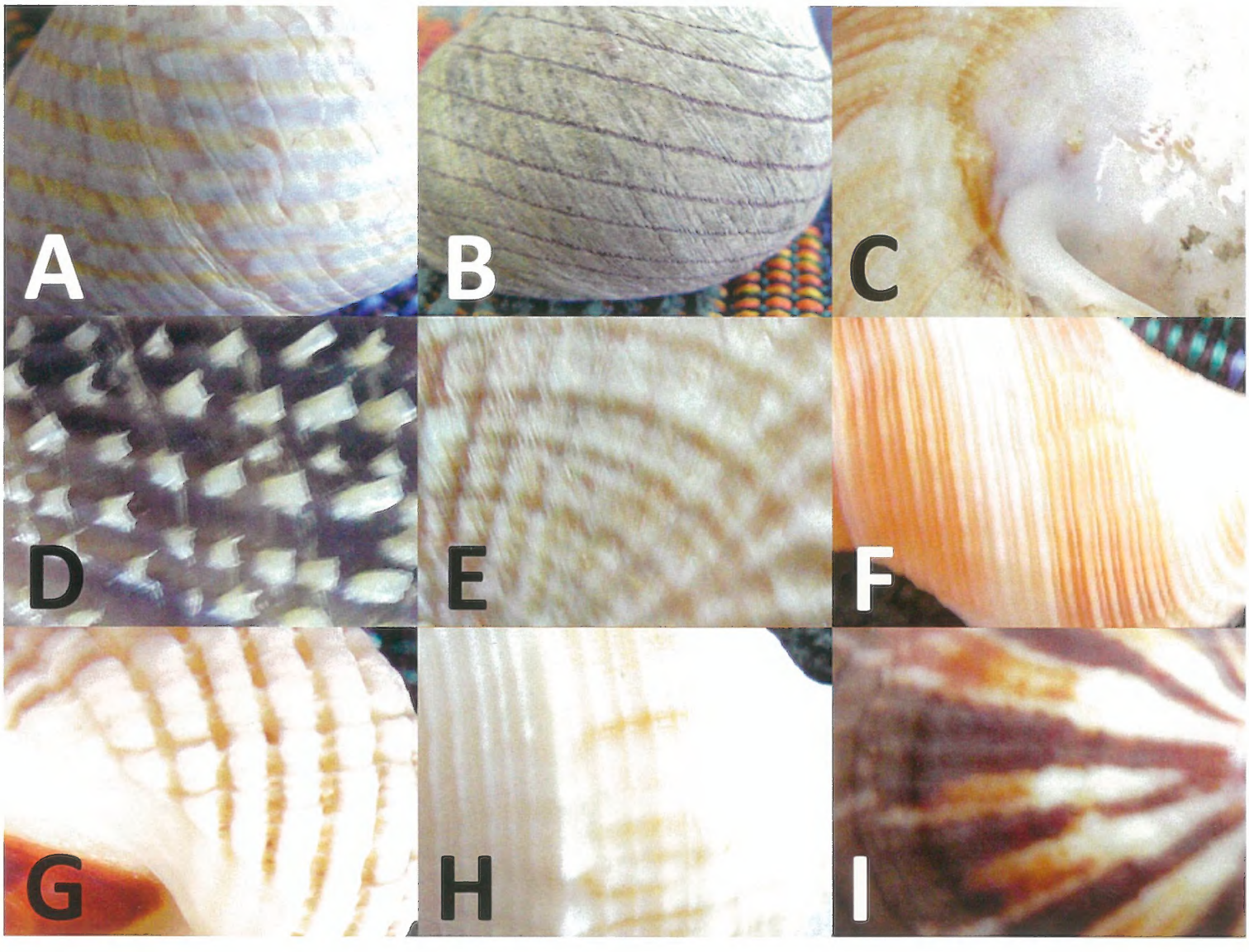
CHITONS: PERSONA NON GRATA
SINISTRAL SHELLS
LIMPETS OF FRENCH POLYNESIA
NZ SHELL SHOW 2013
SOJOURN ON GREAT KEPPEL ISLAND
SHELLS IN THE HIGH COUNTRY

This year's competition



The challenge:

To identify these nine common-to-uncommon New Zealand seashells, preferably without using the hints below. Solutions on the back page.

The Hints:

A: Trochidae, 30mm. B: Trochidae, 16mm. C. 64mm. D: Pinnidae, 155mm.
E: Haliotidae, 81mm. F: Buccinulidae, 50mm. G: From Southland, 22mm.
H: Buccinulidae, 59mm. I: Nacelliidae, 26mm.

Photo on cover: *Cookia sulcata* - World Record Size at 118.6 mm, Mary Agnes Wotton

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Editorial

NZ's National Collection of mollusca at Te Papa is at risk of being moved away from Wellington, ostensibly to protect it from potential earthquake damage. Safety is a relative thing, and must be weighed against other considerations, including the maintenance of a centre of excellence that helps give the Collection real meaning.

Our Club's association with Te Papa is longstanding and mutually beneficial. Losing the Collection, and the expertise that is connected to it, from our region would be a huge blow to us.

Meantime Club members continue to cherish the association, and it is good to see reports of the work of amateur shell collectors (e.g., see p. 14) enhancing the knowledge and value of the National Collection. Many examples of this go unreported, and the interaction between our Club and Te Papa, while informal, is wider than most would realise. Long may it continue.

Why Are Chitons *persona non grata* in Collections?

by Pete Cresswell

Why is it when viewing fine collections, there seems to be a paucity of chitons? Arguably, they can be just as attractive as most other temperate water shells. Indeed, many have more colour. And, many have a more interesting sculpture – made up of valves, scales, spines and tufts.

New Zealand and Australia have very rich chiton faunas – as good as any other region of the world. Many are relatively easy to collect – or at least access, being primarily on the undersides of low tidal rocks or attached to empty bivalve shells; most are of a reasonable size (generally over 8 mm) and they are relatively easy to preserve.

Now, I accept this last point can be contentious. So, they curl up as soon as removed from their habitat. So, they can be almost impossible to straighten out. So, they have to be "treated" differently from other molluscs. So what? The process is not really difficult – certainly the results make the effort well worth while. In simple steps:

When collecting, have handy a smooth-surfaced container, filled with sea water. Into this place any chitons removed. In almost every case, they will straighten out and fasten on to the container sides. They can then be dealt with at some more convenient place – usually home.

***Plaxiphora biramosa* (Quoy & Gaimard, 1835). Photo by Fred Keil.**

I keep a supply of smooth plastic strips, measuring roughly 40 mm x 80 mm. A plastic ruler with one side flat, cut into short lengths is ideal. The chitons are taken and tied to the strip by means of lengths of material: say, 300 - 500 mm x 15 mm.

They should then be placed in methylated spirits for 24 hours – to remove some of the moisture, after which they are put into a curing mix.

The curing mix is made up of 50% water, and 25% each of alcohol and glycerine. There are successful mixes that have varying proportions, but this combination seems to work well. It can be used a few times but, if becoming discoloured, should be discarded. Chitons should be kept in the mix for about 3 weeks, after which they can be removed from the taped strips and placed to dry in a dark place for another 2-3 weeks. By this stage, they will be perfectly dry, have relatively supple girdles, and be completely odourless and well able to be stored flat in a vial or tray for very long periods. The animal will have become quite rubbery.

Given the huge variety of patterns that some intertidal, or very shallow sub-tidal (less than 1 m depth) species possess, a modest selection, displayed together, can be very attractive.

Let's make the humble chiton *persona grata* in our collections.

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Sinistral Shells

by Pat Lakeman

"Sinistral" is the term used to describe gastropods that are "left-handed" – that coil in the opposite way to most shells. If a coiled gastropod shell is held with the spire pointing upwards and the aperture more or less facing the observer, a dextral shell will have the aperture on the right-hand side, and a sinistral shell will have the aperture on the left -hand side.

Just as the majority of humans are right-handed, gastropod molluscs follow a similar trend. By far the majority - over 90% - of gastropods have dextral (right-handed) shells, but there are three kinds of exceptions.

A small minority of species, genera or even famlies are naturally sinistral: e.g. *Busycon sinistrum* Hollister, 1958 in the family Buccinidae; and *Fusinus gallagheri (*Smythe and Chatfield, 1981) in the family Fasciolariidae, or most genera and species of the gastropod family Triphoridae.

A very few species (for example the land snail *Amphidromus perversus*) show an even mixture of dextral and sinistral individuals.

In species that are naturally dextral, very rarely a sinistral specimen may be produced.

The number of species and individual specimens with reversed symmetry appears to be greater among land and freshwater molluscs (with land snails accounting for the lion's share) than among seashells - rather surprising considering that there are far fewer species and individuals of non-marine than of marine shells.

Species and genera that are naturally sinistral:

These occur across freshwater, land and marine categories. Sinistral freshwater snails of the genus *Physa* (family Physidae) are readily obtainable in New Zealand, and in the UK, where they are known as 'tadpole snails' (they don't have a common name here).

There is a wider variety of left-handed species in the land snail category: the 'door snails' (family Clausiliidae), and other sinistral land snails to be found in Europe come from families such as Chondrinidae and Vertiginidae.

In seashells left-handedness is a far rarer occurrence; there are only a few families which normally produce sinistral shells.

The largest naturally sinistral species of gastropod, in the family Buccinidae, is the lightning whelk, *Busycon sinistrum* (syn. *contrarium*), which can grow to nearly 400mm in length and is common off the southeastern coasts of the USA. There are a few similar species in the genus *Busycon* that produce a naturally sinistral shell, but also several naturally dextral species in this same genus.

The family Buccinidae contains several species with naturally sinistral shells; one that is reasonably common

Shells of two different species of sea snail: on the left is the sinistral (left-handed) shell of *Neptunea angulata*, on the right is the dextral (right-handed) shell of *Neptunea despecta*.

is *Neptunea contraria*, a native of the Mediterranean.

One marine family having a large number of species with naturally sinistral shells is Triphoridae.

Sinistralia was a small genus of the family Fasciolariidae (the spindle whelks) which is now absorbed into

A fine display of sinistral and dextral shells by Heather Smith at the 2013 NZ Shell Show in Auckland.

the genus *Fusinus*. As the earlier name suggested, their shells are sinistral.

Among the richly speciose Conoidea, pseudomelatomids of the cold water species *Antiplanes major* and *A. contraria* are sinistral, but other members of the genus, such as *A. sanctiioannis*, are dextral.

In a few species that are naturally sinistral, dextral mutants rarely occur.

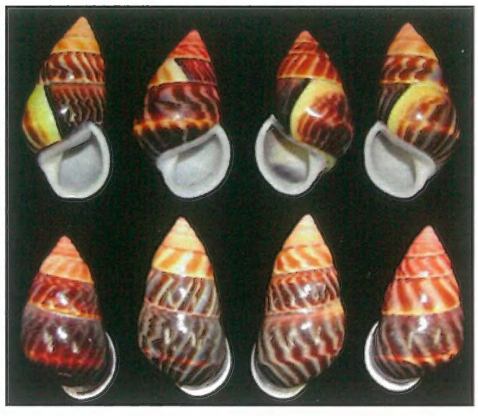
Populations or species with mixed coiling:

These are very rare, and mainly confined to a few genera of tree-dwelling (arboreal) tropical snails. The most well known are the *Amphidromus* snails (family Camaenidae) which have a wonderful range of colours and patterns.

Besides *Amphidromus*, other land snails known to have mixed dextral-sinistral populations are *Liguus vittatus* from Cuba, *Liguus virgineus* from Haiti (both family Orthalicidae); some Hawaiian *Partulina* species and many Hawaiian *Achatinella* species (family Achatinellidae) from Hawaii, and several species of *Partula* (family Partulidae) from the Pacific Islands.

The theory about how come this variation appears independently in unrelated groups is that it results from a simple genetic mutation, the gene being connected mainly with physiological adaptations to life in the trees and not with the direction of coiling.

Amphidromus perversus (Linnaeus, 1758) is a large, dextral or sinistral species. There are currently four named subspecies. Ground colour is white, yellow or orange and there are 12 named colour forms. It ranges from Sumatra and Java to Borneo, Sulawesi (Celebes) and Bali.



***A. perversus butoti* colour form *melannoma* (Pfeiffer, 1852)**

***Amphidromus perversus rufocinctus* Fruhstorfer, 1905**

***A. perversus butoti* colour form *infraviridis* von Martens, 1867**

Acknowledgements and thanks to Carl Ruscoe for *An Insight Into Collecting Sinistral Shells* (2003) on the British Shell Club website: http://www.britishshellclub.org/pages/articles/sini/artsini.htm and to www.jaxshells.org for the images of *Amphidromus perversus*.

Species that are almost always dextral but occasionally produce sinistral specimens:

These are freaks! At least four families of freshwater snails are known to produce sinistral shells (Planorbidae, Ampullariidae, Thiaridae and Lymnaeidae).

Many other families of land snails from tropical regions have some left-handed species, including Achatinellidae, Partulidae, Orthalicidae, Achatinidae, Helixarionidae, Helicidae and Bradybaenidae.

Among marine gastropods, the families Olividae, Marginellidae and Volutidae seem to produce the most sinistral freaks. Jeffreys Bay in South Africa is a well known site at which to find sinistral freaks (for no known reason).

The most common is the Marginella species *Volvarina philippinarum* found in the Philippines.

The most famous is probably the sinistral chank shell, *Turbinella pyrum* - the normal right-handed form of this species is extremely common in India and Sri Lanka, but sinistral specimens are extremely rare and are revered by people of the Hindu faith.

Sinistral Conidae specimens are exceedingly rare. However the fossil records show us that left-handedness was at one time 'the norm' for many species in the family Conidae, as seen in fossil species from Florida such as *Conus adversarius*, *C. osceolai* and *C. lindajoyceae*.

List of the better known marine sinistral freaks:

Cypraeidae
Cypraeovula capensis (Gray, 1828)
Cypraeovula edentula (Gray, 1825)
Cypraeovula fuscodentata (J.E. Gray, 1825)

Muricidae
Hexaplex cichoreum (Gmelin, 1791)
Nucella lapillus (Linnaeus, 1758)

Buccinidae
Buccinum undatum Linnaeus, 1758
Neptunea antiqua (Linnaeus, 1758)
Busycotypus canaliculatus (Linnaeus, 1758)
Busycon carica (Gmelin, 1791)

Melongenidae
Volema myristica Roding, 1798

Volutidae
Cymbiola vespertilio Linnaeus, 1758
Cymbium cucumis Roding, 1798

Turbinellidae
Turbinella pyrum (Linnaeus, 1767)
Vasum turbinellus (Linnaeus, 1758)

Olividae
Ancilla albozonata E.A. Smith, 1904

Marginellidae
Marginella lutea G.B. Sowerby III, 1889
Marginella piperata Hinds, 1844
Prunum apicinum (Menke, 1828)
Volvarina philippinarum (Redfield, 1848)

Conidae
Conus furvus Reeve, 1843
Conus ventricosus Gmelin, 1791

There is a magnificent collection of sinistral shells made by amateur malacologist Harry Lee of Jacksonville, Florida, USA which can be seen on the website http://www.jaxshells.org/reverse.htm

In over 40 years (~1962 to ~2008) of specialised collecting he amassed 164 individual species including 102 Recent, three fossil marine and 59 non-marine species.

***Lunella smaragdus* (Gmelin, 1791) - sinistral specimen (left) from Marfells Beach, normal (though large) specimen (right) from Kaikoura.**

Closer to home, there is evidence in the Wellington region of recurring sinistrality in specimens of *Lunella smaragdus*. In Cookia vol 24, November 2012, two sinistral specimens were illustrated by Kerry Walton. They had been found on Wellington's south coast, and two more were found in that area in January 2013. Illustrated above, a sinistral example from Pat Lakeman's collection.

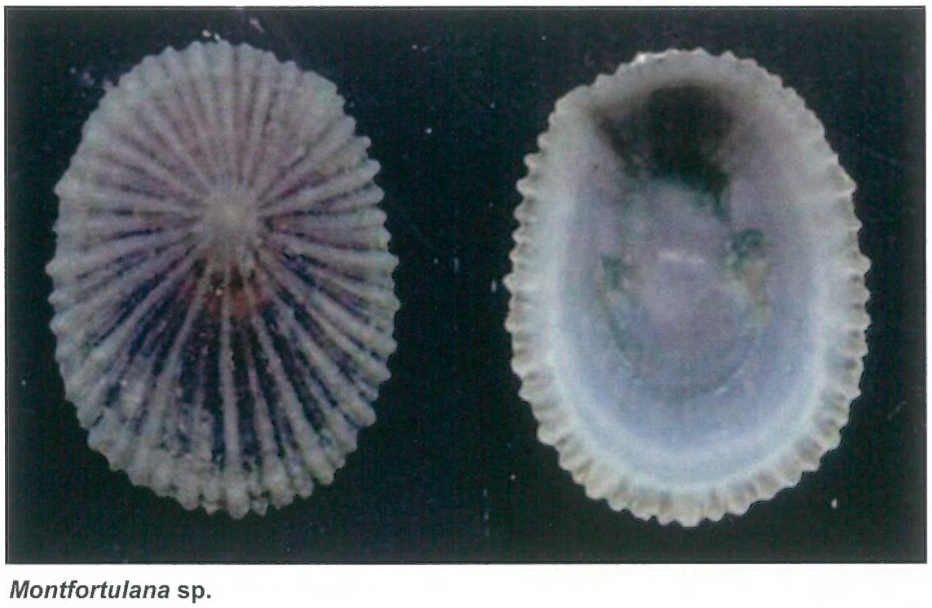
Footnote from author:
Be careful not to 'flip' a photographic image

Chirality of gastropods is often overlooked when photographs of coiled gastropods are "flipped" by a non-expert prior to being used in a publication. This image "flipping" results in a normal dextral gastropod appearing to be a rare and abnormal sinistral one. I have a small snail ornament that depicts a sinistral snail when it probably didn't intend to. The Dutch artist M. C. Escher (1898-1972) produced drawings which included snails but in *Plane Filling II*, 1957 (below), the snail in the lower left corner is sinistral and, being mathematically inclined, Escher probably did know what he was doing.

Limpets of French Polynesia

by Mary Agnes Wotton

A proposed book on the "Molluscs of French Polynesia" started a journey of discovery for me in November 2011 when I was asked to help with identification for the Fissurellidae species to be included in the book. The authors were unable to find experts in this family to assist them and this was a case of my being the only person with a special interest in this family listed in the online Directory of Conchologists published by *Spirula*, the magazine of the Netherlands Malacological Society. Incredible professional photographs of the species were sent to me to help with the project even though I pointed out that I had very few Fissurellidae from the Indo-Pacific and was more familiar with the Nacellidae and Siphonariidae of this area.



***Montfortulana* sp.**

Fissurellidae occurring in the Indo-Pacific mainly belong to two genus, *Diodora* and *Emarginula*. Among the species found in French Polynesia however, was one from the genus *Montfortulana*, Habe, 1961. The shells of this genus have a strong channel but not in the longitudinal axis of the shell like *Montfortula* species. This find makes a total of only three species in this genus worldwide, the other two species also occurring in the Indo-Pacific.

Pacific *Diodora* species number about eight to twelve. The five from French Polynesia were compared with other members of the genus from Hawaii, Pitcairn Island, Australia and the Philippines in particular, only two being identified. Similarly with the *Emarginula* species, only two of the seven were identified. A couple of these specimens were quite exquisite.

Images of other limpet families were also sent to me including Lottiidae, a single pure white specimen, two or three new, unnamed species of *Asteracmea*, none of them collected live, and *Eoacmaea conoidalis*. *Scutellastra flexuosa*, widespread through the Indo-Pacific, was also included. For cross-checking, five Siphonariidae images were sent, mostly juveniles under 10mm, of which three were named. These included *Siphonaria atra* in various colour forms, also widely found throughout the Indo-Pacific and eastern Australia and *Siphonaria guamensis,* common in Singapore and a few other Pacific locations.

DNA sequencing was carried out on the three Nacellidae species found – *Cellana taitensis* Roding, 1798, *Cellana radiata orientalis* Pilsbry, 1891 and *Cellana dira* Reeve, 1855. The taxonomic history of the last of these is confusing. It was originally described by Reeve as *Patella dira* and included in his Conchologia Iconica.

Next to refer to this species under the name *Helcioniscus dira* were Tryon and Pilsbry in 1891, in the Manual of Conchology, Vol. XIII – a Monograph on the Acmaeidae, Lepetidae, Patellidae and Titiscanidae. They remarked that *Cellana* H. Adams, 1869 had priority over *Helcioniscus* "but had not been adequately defined".

Powell, in 1973 in his monograph on Patellid limpets, gave the name *Helcioniscus* Dall, 1871 as a synonym of *Cellana,* but he did not include *dira,* not even in his list of species no longer included in the Patellidae. Reeve's Conchologia Iconica where many of the species of *Patella* and *Helcioniscus* (*Cellana*) were originally described, is included in the bibliography, as is the Manual of Conchology, but somehow *dira* was overlooked by Powell.

In their 2009 checklist of mollusca of French Polynesia, Tröndlé & Boutet

list *"Patella" dira* under Nacellidae, the name originallt used by Reeve in his description of the species in 1855. It does not currently appear in on-line checklists e.g. WoRMS and OBIS.

Many species described in Reeve's Conchologia Iconica came from the privately owned Museum Cuming in Southwark, London. The specimens had been collected by Hugh Cuming on his various voyages to French Polynesia, the west coast of South America, and the Philippines. Trained as a sail maker in England where he was born, Hugh went to Chile as a young man, remaining there for 7 years, and retiring at the age of 35. He built himself a schooner "Discoverer" specifically for the purpose of collecting biological specimens including equipping it with dredges, probably the first vessel of its kind. His maiden voyage in 1827 was to French Polynesia where he spent eight months collecting. He returned to England in 1831, taking his vast collection of species, both molluscan and plants. He disposed of his plants quickly and then concentrated on his main interest, his shells, among them a large number of new species. G.B. Sowerby and William Broderip made his acquaintance and began preparing descriptions of them. In 1842 Sowerby began publishing his Thesaurus Conchyliorum, a series of illustrated monographs on shells based on the Cuming collection. Following close behind was Reeve's Conchologia Iconica, the first volume published in 1843, also illustrated with specimens from the Cuming collection. In 1866 Hugh Cuming's collection of nearly 83,000 specimens was purchased by the British Museum for £6,000.

With regard to *Cellana dira*, there remains some ambiguity as to the correct taxonomy of this species between sources. There is no record of it being synonymized, but it does not appear to have been formally transferred into Nacellidae from Patellidae. It bears a vague resemblance to the Hawaiian *Cellana* species and is described by Reeve "Shell ovate, erectly conoid, densely radiately ridged and ribbed, ribs and ridges very closely broken up into small warts; dark blue-black, subiridescent in the interior." Comparing Reeve's illustration of this species with the recently found specimens and the type in the British Museum, I have no doubt they are the same. Taxonomic revision is in progress and I expect this species to be placed as *Cellana* dira in the family Nacellidae in due course.

Cellana dira

Diodora cf. granifera

Cellana taitensis

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Kaikoura's Giant Squid

by Bev Elliott

Sunday 3 February, 2013:

Ailsa, my friend and neighbour, approached me as soon as Church was over. "Ted texted; there's a Giant Squid at South Bay!" Ailsa, the organist, had a few duties to attend to first, but very soon we were in her car, heading for South Bay. Just in time, for her husband Ted came driving along, towing a trailer full of ice and squid, on the way to Kaikoura Aquarium.

Next morning I was at the Aquarium at 10 o'clock opening time, and I wasn't the only one. Megan the curator was late, battling with a broken water pump, and trying to deal with ever-increasing numbers of visitors! She finally found time to show me the eye, and a tentacle, and told me that she would be dissecting the squid that evening, with a television cameraman there filming it all. "Are the public allowed to be there?" I enquired, not very hopefully. "The more the merrier" she replied, to my delighted surprise. So, as you can imagine, I was right there in the front row that evening.

Marine biologist & curator of Kaikoura Aquarium, Megan Bosch, holds up a tentacle, 4 Feb

Can anybody tell us anything about preserving squid pens? I still have three little *Sepioteuthis australis* pens from Great Barrier Island in the 1950s. The little ones have survived all that time, but larger ones have not. Here at Kaikoura I have found a few *Nototodarus sloanii*; the pens may last 10-20 years but eventually disintegrate. You'd think *Architeuthis dux*, being larger, would be stronger, but quite the contrary. Any bits and pieces that I've had over the years, have fallen to pieces years ago. As Megan dissected the squid, I was longing to get my hands on that pen, but I knew that I had no idea how to preserve it. When I asked her what she was going to do with it, she said "Let it dry out". No, that won't work, it is so fragile and already falling to pieces, like the one I found in 1994, which has completely vanished years ago. I wish there was some way we could preserve that pen for the Aquarium - does anyone have any ideas about how?

Clockwise from top left: Megan Bosch (right) and her assistant Brianna dissect the squid, while the tv cameraman films it, & the public enjoys a most unusual spectacle, 4 Feb; Ailsa Howard looking at the squid on its way to Kaikoura Aquarium, 3 Feb; A big long squid, 4 Feb; Bits of squid including eye & tentacle at Kaikoura Aquarium, 4 Feb.

Squid facts file:

- The size of the Kaikoura giant squid is estimated to be 11 m long and around 150 kg.
- Colossal squid (*Mesonychoteuthis hamiltoni*) are slightly shorter than giant squid (*Architeuthis dux*), but have a larger, heavier body.
- Te Papa has the world's only complete colossal squid specimen - it tips the scales at a massive 490 kg. In contrast, giant squid weigh up to about 275 kg.
- All squid have sharp horny beaks made of material similar to human fingernails. The colossal squid has the largest beak of any squid, including the giant squid. The tips of the colossal squid's tentacles (the clubs) are armed with two unusual rows of sharp, swivelling hooks, and two rows of tiny suckers. Other squid species also have tentacle hooks.
- Te Papa's colossal squid was found and frozen in Antarctica in February 2007; it was defrosted and examined in April 2008, and is currently on display.

Bangkok Seashell Museum

by Geoff Foreman

In May my wife (Raewynn) and I had the privilege of visiting an old friend (Bert Lee, whom some of you may remember when he sold his shell collection a few years ago upon leaving Tolaga Bay) who now lives in rural Thailand. Bert's interest in shells has continued but it was the 9 year old niece (Min) of his extended Thai family that triggered our visit to the Bangkok Seashell Museum. Min just loves shells. Before we visited we asked what could we bring the children as presents? Min's answer was that she had a dream that we brought her a beautiful shell. We took her a perfect Paper Nautilus. She loved it. Her treat before they all farewelled us at Bangkok was to visit the Seashell Museum. This museum is a delightfully cool and spotless place with a very hospitable and attentive staff who have a good command of English.

The museum has three floors of displays of a large and diverse collection of shells; perfect specimens and most beautifully presented with both English & Thai translations. The shells are mainly from the Indo-Pacific region with Thailand naturally to the fore. New Zealand is well represented in a fine display of abalone with some excellent specimens of *Haliotis iris* and a group of five fan shells.

A boyhood memory I have is reading about what was then considered the rarest, most valuable of all shells, the almost mythical 'Glory of the Seas': *Conus gloriamaris*, first described in 1777 but known by only two specimens. The discovery of many more in the Pacific in later years may have ended the legend but I was still delighted to see three perfect specimens on display.

Certainly a museum that is well worth a visit.

Those Troublesome Juveniles

by Fred Keil

As an enthusiastic micro-shell collector, and a relative newcomer engaged in this fascinating part of shell collection, I have often been frustrated by finding a shell that defied my identification. All sorts of clever books were consulted, but to no avail. One starts to get feelings of grandeur in having perhaps discovered a new species.

All of the shell sand that I search has been through a number of sieves, and consequently one would expect there to be quite a number of juvenile shells in the mix. Some of these youngsters I have now learnt to identify and ignore, but some other beginner might like to learn the names of a few of these troublemakers. Just a list of four species, but I'm sure many others could be added.

Thanks to Bruce Marshall, Kerry Walton and others for putting me on the right track.

Maoricolpus roseus roseus

Astraea heliotropium

Dicathais orbita

Lunella smaragdus

Another *Cookia*

by Ian Townsend

Did you know there is (or was) another *Cookia*? Our magazine was very appropriately named after Cook's turban shell, *Cookia sulcata*. Back in the 1750s when Linnaeus began naming every living (and dead) animal it was decided that plants and animals were so strikingly different that it wouldn't matter if generic names were repeated across the two major kingdoms. Sure enough, a while ago I was looking up some plants in the genus *Pimelea*, and there I came across *Cookia*! In 1791, Gmelin* used the genus for a couple of New Zealand plants. However he was beaten to the punch by another botanist, so in botanical circles the name is in synonymy anyway.

* Yes, the same old Gmelin who named our mussel - he was a man of many parts!

Notes on NZ Collected Species

Umbraculum umbraculum (Lightfoot, 1786)

This fine specimen is the shell from a slug and was found on a recent trip to Northland during December 2012. It measures 51 mm x 42 mm and it was a rare find on Ruakaka Beach located high above the high tide line near the mouth of the river.

KATHY CARSON

Aeolidiella drusilla

Bergh, 1900

This nudibranch was photographed at Kaikoura Peninsula, in November 2012.

BEV ELLIOTT

Mitromorpha gemmata Suter, 1908

This 8.5 mm specimen was found in shell sand from Cow Island, Stewart Island in April 2012. To reach this island you take a water taxi across Paterson Inlet and walk through a few dunes to the sandy beach on the eastern side. The island is linked to this beach at low tide. A small excavated area on the southern side of the island usually contains shell sand with interesting southern species. The keyhole limpet (*Monodilepas monilifera*) can be found along the high tide mark on the main beach linking the island.

JENNY RAVEN

Semicassis pyrum

(Lamarck, 1822)

This was the year for *Semicassis pyrum* as from March to June 2013 several large fresh specimens washed in around the Waikanae river mouth. The best were purple pink in colour and around 75mm high. Something had upset the shell beds which must be just off shore as most of these shells were cast in still containing the live animal.

JENNY RAVEN

Epitonium tenellum (Hutton, 1885)

During a month long tour of the South Island, Lesley and I had a look along Nelson's Tahunanui Beach. We were looking in particular for *Phenatoma rosea* (Quoy &Gaimard, 1833), but our search for this pretty little shell was in vain. By this time we were fairly close to the southern seawall, and there was a good selection of smaller shells. Much to our surprise, Lesley picked up two specimens of *Epitonium tenellum*, an unusual find when it's southern range is often thought of by collectors as being about the Bay of Plenty.

Later that week we were at Pakawau, just south of the Sandspit, when Lesley again found *E. tenellum*. This shell was a little rough, but it was a pretty good size (15.2 mm). This should have been the end of the story, but just to prove that I could also produce the impossible, a return about a month later produced three further specimens from Tahunanui Beach. On returning home we contacted Bruce Marshall of Te Papa fame, who was happy to receive a shell from each of the locations. A further two were left with local club members so they can continue looking for these shells, and prove our finds were not just a fluke. [Subsequently, Kathy Carson reported that she has regularly found *Epitonium tenellum* at Tahunanui Beach, some around 12 mm - Ed.]

FRED KEIL

Cavolinia uncinata

(Rang, 1829)

Found at Oraka Beach, Mahia, in September 2011; 14 mm x 11 mm.

KATHY CARSON

A rare common shell for Kaikoura: *Nerita melanotragus* E.A. Smith, 1884

Bev has found a Nerita! Now that isn't likely to send a ripple of excitement through the Wellington Shell Club. You North Islanders won't realise just how rare *Nerita melanotragus* is, in the South Island.

Back in the 1960s/70s Frank Climo found a few *Nerita* specimens near his home at Puponga, NW Nelson, and Tony Barnes found one at Adele Island off Abel Tasman National Park. These are the only other South Island locations where *Nerita* specimens have been found, as far as I know, and I've been collecting around the top-of-the-south for 55 years. I'd be interested to hear of any others.

On 11 December 1979 I found a nice live *Nerita* specimen on the south side of Kaikoura peninsula. I couldn't believe my eyes! 29 mm, and in perfect condition. I never pass that spot without thinking about it, and wondering how one lone live shell could get there, all by itself, with never the slightest sign of another one - until 34 years later, there is another one, about 100 m from the site of the first, alive and perfect, 25 mm, on 2 March 2013.

And that's about 120 km south of the Nelson locations, so Kaikoura should be a southern record for this species.

BEV ELLIOTT

Thanks to Bruce Marshall & Te Papa Tongarewa Museum of NZ for this map showing the range of localities for *Nerita melanotragus* specimens in the National Collection.

A rare common shell for Chatham Islands: *Diloma bicanaliculata*

(Dunker *in* Philippi, 1844)

Even exotic locations have their dull days. Such was Owenga, in October 2007 when I found myself picking up some of every species I could find, "just for the record". And record it was - the first record of this unassuming little shell from the Chatham Islands. Two of the three specimens I found are now in the National Collection at Te Papa.

PAT LAKEMAN

A rare shell! *Neothais smithi* (Brazier *in* Etheridge, 1889)

This 23 mm specimen was found on the underside of an overhanging rock at extreme low tide on Pananehe Island at the eastern end of Spirits Bay on 19 September 2013.

Pananehe Island and surrounding rocks is one of the few locations on the New Zealand mainland where this species has been recorded alive in the past.

The last finding by Wellington Shell Club members appears to be in 2001. The animal from this specimen has gone to the National Collection at Te Papa.

JENNY RAVEN

A Freshwater Limpet from Tahunanui Beach

by Bert van Tiggele

Tahunanui Beach is a lovely sandy beach, close to Nelson harbour, on the top of the South Island. Sometimes the beach has a good washup with lots of fine shell material. During the eight years I have lived in Nelson, I have found more than 150 species of molluscs on this beach. With a little bit of luck, the beach is very good for shell collectors.

A few months ago I found two very small limpet shells in sand material, which I had never seen before. I did not realise they were not marine species. Later they seemed to be freshwater shells of the Family Planorbidae, *Ferrissia dohrnianus* (Clessin 1882), also named *Gundlachia lucasi* by Suter in 1905 in his Manual of the New Zealand Mollusca (page 617, plate 24, fig 25).

The shell has no spiral, is conical, and has a limpet form. The size of the shell is very small, length 2.5 mm, height 1.2 mm and width 1.0 mm; the colour is light brown and transparent. The shell has no septum. These shells are found on the North Island near Wellington.. Powell (1979) described the shell as *Gundlachia lucasi*, Suter 1905 and "found on North Island, Lake Waikare and Inglewood, attached to stems and underside of leaves of aquatic plants in quiet waters".

How do these freshwater shells wash in on Tahunanui Beach? Well, at the beginning of the beach, a small stream comes from the mountains around Nelson and flows into the sea. This flow of fresh water brings land and freshwater snails to the sea and they wash ashore when the wind is coming from the right direction. Populations of this species must live close to Nelson. In the Collection Online of Gastropoda from Te Papa Museum of New Zealand, there is an example of *Ferrissia dohrnianus* from Nelson (harbour), found by W. Matthews in 1945 and identified by B. Marshall in 2006. I am very happy to also find these small shells, on the beach at Tahunanui.

The shell is on the IUCN Red List of Threatened Species 2012.2.

***Ferrissia dohrnianus* (Clessin, 1882). Drawing by Bert van Tiggele.**

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The IUCN Red List of Threatened Species 2012.2

NZ Shell Show 2013 – Pakuranga, Auckland 3-5 May

by Graham Aamodt

For the past few weeks Pat and I had been organising our exhibits for the show. I was entering a display of one locality (my choice was shells from the Taupiri Bay/Bland Bay area) and a single specimen >50 mm in which I entered a very fine *Xenophora pallidula* from the Philippines, and gifted to me by Kris Woods a few years ago. Pat was entering a number of displays, including our favourites, a selection of the Haliotidae family.

Finally the big day arrived: we arrived in Auckland and checked into our motel, the Golflands Motel at Botany.

We arrived at the Pakuranga Te Tuhi Centre for the Arts at around 3pm and were greeted by Peter Poortman, and lots of other shelling friends. We collected our exhibitors "goodie bag" from Peter and proceeded to set up our displays. All the while we chatted away to various members of the 'shell fraternity', including some fellow shellers and friends from overseas.

The displays of shells were quite magnificent, with a huge variety of species in 36 categories, both large and miniscule, and nicely exhibited. The exhibits were from shell collectors throughout New Zealand and overseas. There was also a good presence from New Zealand and overseas dealers, with a myriad of shells, books on shells and other shell related material and craft for sale.

The next day was overcast, but at times the sun peeped through and we quickly headed to the hall to see the outcome of the judging from the night before. Well would you believe it, I got a 2nd in the >50 mm category. This was most unexpected as there was extremely tough competition with many fine specimens on display. A number of people congratulated me on having an excellent *Xenophora* shell (thanks again Kris). Other exhibitors from the Wellington Shell Club did well, with Jenny achieving three firsts and a few seconds, as well as Exhibitors Choice for her NZ Open General display. Kris earned two firsts for her WW One Country and WW Bivalvia and three placings; Selwyn only entered one display and got first place for his Volutidae of Australia; Pat achieved a second and two thirds; Mary Agnes a third, and I got a second and a third placing.

Talking to Heather (who had entered around 70 displays), the show had more than 200 top notch displays from around 25 exhibitors. I must say there were so many that it took me many hours just to see everything and marvel at the tremendous effort put in by the exhibitors in making their displays. One display in particular of land snails that was in the Land/ Freshwater/Fossil category was exceptional, with the display case girt by flax and the land snail shells placed on fine sand – it looked great to me and deserved its 2nd prize, if not more.

Along with the shell displays and dealer tables the Auckland Club conducted raffles and provided a large area for the public with free shells and books. I noticed that this area was very well patronised, especially by the kids. Looking at the joy (and at times amazement) on some of the youngsters faces, the Auckland Club should have a fair bit of interest from prospective members.

In the afternoon the Auckland Club auction was conducted very well by Peter and his helpers, with the bulk of the 70 odd lots from the Bob and Betty Grange collection, and mostly overseas shells. The weather during the auction was typical Auckland – atrocious, with thunder, lightning and torrential rain. At times we could not hear ourselves think.

In the evening the prizegiving was held at Valentines, just a few minutes away from the shell show venue. As expected the bulk of the silverware went to the Smith and Poortman residences! A good turnout of around 40 people, good food and convivial company made the evening most enjoyable.

The next day, and despite the rain and wind, the show was rolling along with a goodly number of the public attending. From about 4.30pm we packed up our displays and headed back to our motel.

The following Monday we attended a barbecue kindly hosted by Heather and Alison, and everyone swapped more shelling stories. A lovely afternoon was had by all.

Pat and I had a nice time and it was great to catch up with other shelling folk.

For making the show a resounding success, a special thank you must go to Heather Smith and Peter Poortman as chief organisers, along with all of their helpers.

Amazing shells and happy faces - the excellent individual displays pictured here are by Jenny Raven (right), Heather Smith (below), Peter Poortman (bottom left) and Kris Woods (bottom right). Thanks to Mary Agnes Wotton and Pat Lakeman for the photographs.

Sand Shells

by "No Names"

In winter 2003 my husband and I spent several days at Wainui Beach, north of Gisborne, visiting beaches in the area. We included a day at Mahia Peninsula, finishing at Mahanga Beach which I'd read about in an Auckland Shell Club magazine. There had been a shell wash up so we spent several lovely hours sorting through shells before a couple, who lived across the road, came over and said we looked as if we were finding something of interest. They invited us for coffee and I was soon rummaging in their garden for volutes - with his permission and to my husband's horror, as they were so smelly!

In July the following year, we stayed at Mahanga (no wash up this time) looking for and finding various shells at spots recommended by the same couple. Before leaving, we went to say goodbye and thank them for all their useful info when he asked if I'd got some shell sand to take home? "No" - so he gave me a container which I filled at the recommended spot, and home we went.

The next few weeks were spent, after work, sitting in the sun with reading glasses, magnifying glass and long-nosed tweezers, removing all the shells from the sand, getting aching neck and back muscles, shaking hands and going cross-eyed. I wrote to the couple, telling them of all the shells I'd retrieved (the smallest probably 1.5 mm), re-thanked them for their knowledge, but never again would I sort shell sand!

Fast forward past many more beaches, a completely different part of New Zealand, and it's 2013.

The phone rings - a Wellington Shell Club member interested in us meeting, so she came round for coffee and a look-see at my collection. I even proudly showed her my sand shells from Mahia, now in two see-through containers. "Very nice."

The following week I went to her place for coffee.

On entering her shell room I instantly coveted her suite of matching shell drawers made for her by a joiner whom she happens to know. A lovely collection of New Zealand shells - both land and sea. But then … a whole new world opened up to me … something I'd never known about - sand shells. Microscopic, tiny specs, hardly seen by the naked eye. She had taken and enlarged photos of them so you could now see what that scrap of sand actually is. Truly amazing.

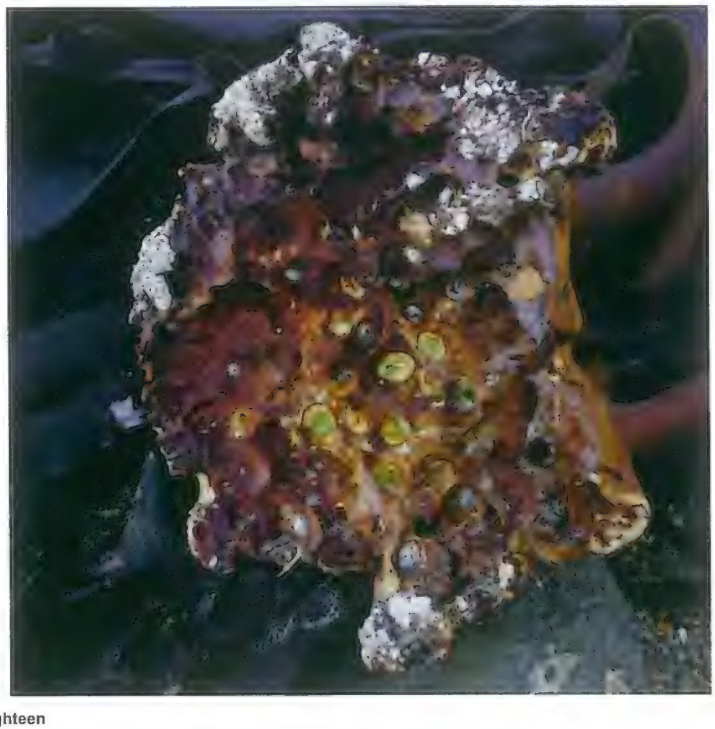
She must have smiled to herself when I had shown her my collection of Mahia sand shells!

Bountiful Kelp

by Mary Agnes Wotton

This photo was taken at Waipapa Point, at the southern end of the Catlins region, South Island in 2012. The washed up kelp root contained 23 specimens of *Siphonaria australis*, Quoy & Gaimard, 1833, varying in size from 10-23 mm. I have found this species infrequently on washed up kelp roots before, but usually only about 2-4 of them, so this is by far the largest number I have ever seen on kelp.

Ed. note: A recent study showed that kelp rafting played a role in maintaining gene flow between otherwise isolated populations of such inter-tidal species as *Cantharidus roseus,* between NZ sub-Antarctic & Stewart Islands and Southland. *Siphonaria australis* was not included in this study.



Sojourn on Great Keppel Island

by Jenny Raven

Island holidays for me have often resulted in shell adventures and surprises. This holiday was no different. Following the Keppel Bay shell show I spent a week on Great Keppel Island with Heather Smith and her sister Alison. I am not a great collector of foreign shells and the tides were not at their lowest but the weather was warm and I was looking forward to a relaxing time.

The wind was blowing when we left Yeppoon and the half hour fast ferry trip was rather rough. A smaller boat took us to Svendsen's Beach at the far end of the Island. Here we were hosted by Carl and Lyndie Svendsen. We were accommodated in sturdy luxury tents in a sheltered glade just back from the beach. The only other people about were on boats anchored offshore. The ablutions consisted of various outhouses decorated with shells and wood carvings and the kitchen was under an open canopy just off the beach. The tents had netted windows and the warm temperature allowed us to leave these uncovered at night. Quite an experience. The first afternoon we walked round the rocks to Leeke's Creek and Beach. There were quite a few shells washed up on the beach but not much under the low tide rocks. I found some nice *Polinices* specimens and *Doxander campbelli*. We got back on dark and sat round the open fire place with our tea. I went to sleep to the sound of the sea.

The next day we took a walk in the opposite direction to Butterfish and Wreck bays. We were aware that black arabica cowries had been found at Butterfish. Lifting rocks we got down to *Haliotis varia*, some small colourful rock shells and *Erronea errones* but no arabica. Wreck Beach was a more exposed beach - lots of small black and white nerites and cuttlefish beaks but not much else. Bleached land snails littered the track between the two beaches. That night we sat round an open fireplace and Lyndie played her guitar, and with two other guests we sang songs into the night. Later what looked like a large plastic spider on the wall of the WC proved to be a very much alive Huntsman spider when I waved the toilet brush at it. In the morning it had gone.

Photo credit Greg Thomas http://www.mycapricorncoast.com/index.html

The next afternoon we returned to Leeke's Beach – this time via a bush track and sheltered glade where we saw hundreds of butterflies - mostly blue and black and white. They hung from the trees and flew about when disturbed – it was like a fairy grotto. Once over the hill we were behind Leeke's Beach again, however the creek was now blocking the way and we had to wade through thick mud. Back on the beach Heather found a lovely fresh *Amoria maculata*. I found *Amoria zebra* and some nice *Mactra* and *Tapes* specimens. The tide was low when we set off to return back around the rocks. I just had time

Arriving at Svendsens Beach

to turn a large rock on the point and there was an arabica cowrie - unfortunately not black. Back at the camp I shined a torch in the toilet – no spider. I looked up and there it was above the door looking down at me. Lyndie was summoned and took it away for release but did comment that they always return to their home - just as well we were leaving the next day.

The next morning there was time for Carl to show us some shells he had collected from the island after storms. He had several spares and offered these to us. I came away with three cassids found on the island (*Phalium bandatum*, *P. bisulcatum*, and *Semicassis angasi*), *Conus spectrum*, *Persististrombus latus,* a purple pecten (*Mimachlamys gloriosa*), a *Volva* shell, *Tonna cumingii* and *T. chinensis*. Then Carl dropped us off by boat on Leekes Creek and with our luggage already transported to our new accommodation, we were happy to walk the rest of the way. Time to pick up a nice large *Natica* shell and yellow tellin (*Phylloda foliacea*) and a few more *Doxander campbelli* and *Amoria* specimens, then we set off on the long walk to the end of the beach. Lunch in the sun, then a bush walk over the hill to Putney beach and finally Fisherman's Beach and our new accommodation.

This end of the island was quite different. There were some private homes, a shop, a pizza house and a café/bar. There was also a large empty camping ground and a disused resort - the latter having closed some years previously. It must have housed hundreds of people but the buildings now sat forlorn and empty - beds and curtains still in them and fences in disrepair. We met Raewyn and Peter, ex-New Zealanders who managed a lodge and our new accommodation, which was a quality private residence - very nice. It also had a few shells on the window ledges, in the bathroom and in the pot plants. We asked someone about the sign saying "the Shell House" but were told this had long closed and the shells gone. That afternoon we walked to Shelving Beach where Heather and Alison had a snorkel and saw clams, then over the hilly track to Monkey Beach, another black arabica spot. The tide

was now low very late in the afternoon. We turned rock after rock but no success. Heather entered the water in her wet suit but no luck either. Dusk was falling and we still had the large hill to navigate. We made it up the track in good time but needed our torches to find the end of the track to our accommodation.

Heather woke early and took off to Leeke's Beach. That afternoon we decided to visit Long Bay. We were told to go along the road and look for a hill track. This proved difficult to find but fortunately a beach buggy came by. The driver said there was a short cut along the disused resort airport runway and she held a key to let us in the locked gates. Even nicer we were invited to her house for a cup of tea the next morning and in a further coincidence, confirmed this was the former shell house. We set off along the runway, the old wind socket beckoned but no one flew in these days. Heather and Alison played at being aeroplanes. At the end of the runway we found an easy track onto the beach. Long Bay like Wreck Beach was bare of people and shells, except for cuttlefish beaks, but at one end Alison found a lovely fresh stromb (*Euprotomus aratrum*) among the rocks. At the other end of the beach a track led over the dunes and we were back on Monkey Beach where we had been the day before. This side was sheltered and sunny. With no-one about it was necessary to partake in the Smith tradition of skinny dipping – also time to wear the sarong I had purchased in Rockhampton … what a nice afternoon. Pity we had not known of this route the day before. Soon it was time to return back along Long Beach and the runway. We reached the old terminal building where a faded "Welcome to Great Keppel Island" sign looked sadly at us. The roof on the building was falling in and round the back, trees had toppled onto buildings and water covered the tennis and netball courts. Birds had taken over. A whooping sound led to

the squash courts where peacocks looked out at us and perched on the railings. Screeching bats hanging from a tree added to the atmosphere. With Alison's binoculars you could see their eyes watching us. What an uncanny place. We found a gap in the fence and climbed through close to our accommodation. A quick walk on the beach enabled me to find another yellow *Phylloda foliacea,* a *Bulla* shell, and a *Conus spectrum,* and to capture a lovely sunset. That night we had pizza from the café for tea. It was warm enough to sit outside and enjoy the lights in the trees and the ambiance.

Next morning we packed for the 3.40pm boat. First we had our morning tea engagement. We met our hosts - two sisters-in-law - and were shown into the former shell house. What a surprise, the shells had not gone, they were everywhere – cabinets lined the room and there were baler lamps, bright corals and all manner of shells, most without labels. They even extended into the bedroom and adorned pot plants. Apparently the shells had passed through successive owners with the sale of the house. The current owners did not know anything about shells and regarded them with amusement. They were quite happy if we wanted to purchase some. There was not much that Heather needed, having the best of most shells. I however had a lovely time and found several of interest. I just couldn't take all the *Spondylus* shells I would have liked. We sat in the garden under a canopy and had a cup of tea. Milk pots from the old resort were strung overhead. Another visitor joined us and told us what the resort used to be like, with staff in uniforms, streets filled with people, skydiving, camel riding and lighted torches along the promenade at night. Apparently a new resort was going to open shortly in place of the old and the locals were divided over the issue. We had time for an ice-cream, goodbye to the curlew birds and a friendly echidna, and off on the boat home.

Later relating this tale to my Friday night friends in Wellington, one gave an interesting insight on being on Great Keppel Island in the late 1970s. He had sailed there on his boat with some young ladies in tow. Great Keppel Island was the place to go – it was full of young people looking for fun. He recalled the advertisements saying "Get wrecked on Great Keppel Island". Would this happen again? We were happy our holiday had been great as it was.

Inside the shell house

Fisherman's Beach

Trivia

A light-hearted exchange of emails between an editor and our Nelson correspondent:

"Why did you never tell us that the Dutch term for bivalvia is tweekleppigen?
Pronounced correctly tweekleppigen probably sounds unremarkable (well Dutch unremarkable) – but on the page it brings such a smile to an English-speaking face ☺
Hope all is well with you and yours – regards, PatL"

> "Dear Pat,
> I am sorry I did not tell you about (fonetic) the twai clappichen (2 valves). It's a lovely word but hard to pronounce for English speaking people - but simple to understand!
>
> Hope to see you soon ...
> Love Jenny and Bert"

Shelling Here & There Around Northland

By Ian Townsend

Let me say at the beginning this was not strictly a shell collecting trip; it was a family get-together at Russell, although the families were remarkably permissive of our eccentricities.

Leita and I travelled north via Taranaki because the Desert Road was buried in snow. This gave me a chance to see my daughter, son-in-law and two grandkids at Stratford. Then it was on to Mokau for the night and on to Auckland the next day to catch up with Leita's daughter, son-in-law and grandson. They travelled separately to our destination in Russell - a lovely older-style house with plenty of room for all. Leita's eldest son and wife also joined the party making seven altogether. My eldest son, his wife and two grandsons from Whangarei also visited us, so family-wise we did pretty well. We heard kiwis calling at night and by day were entertained by cheeky wekas scrambling for hand-outs.

Morning coffee on the waterfront at Russell satisfied all. We found the rather uninviting gravel beach was a good place to pick up nice specimens of *Cominella quoyana*. We also went over the hill to Long Beach, a pleasant walk but only the usual bivalves and examples of *Maoricolpus*.

One day we took the back roads out to the base of Cape Brett. Interesting country, but not recommended for shelling. Maybe the tiny *Notoacmea* specimen I found stuck to a bone at Te Huruhi Beach will prove interesting?

At Paihia we went towards Waitangi and stopped to have a look at the drifts of shells on the flats. Amongst the many *Xymene plebeius* were more interesting things such as little *Neoguraleus* species and other as yet unidentified shells.

We also did a trip to Pukeiti Kauri Forest. Department of Conservation has built a raised walkway so this wet swamp forest can be viewed in comfort and there is less chance of infecting the area with the Kauri die-back disease.

For our final night's celebration we all went for a meal at the Duke of Marlborough Hotel, where the price of a meal included its artistic arrangement on a huge white plate, and also the chandeliers hanging from the ceiling. The others rather cynically agreed that I got the best "bang for my buck" with a whole steak-and-oyster pie served with the delicately placed vegetables. (Do you think that they may have been rude, or jealous?)

That wasn't the end for us. While the others left for home, Leita and I spent an extra day or two heading north to the Karikari Peninsula. On the way we stopped at Mangonui for toasted sandwiches. They actually weren't on the menu, but the obliging chef did them for us and they were delicious!

Then a quick look on Coopers Beach looking for fossil coconuts but, as usual, none showing themselves. At Rangiputa we found a motel where we had stayed five years ago and noted the spa pool was still in action. The beach was full of all the old familiar shells, but most of the scallops were damaged. There must have been really rough seas recently, because there were lots of sponges on the beach, completely rooted up, including the stone they were attached to (but no *Chlamys* shells!). There were lots of very large bubble shells and *Barnea similis*, which I didn't recall seeing before. We went north along Puheke Road to Karikari Beach. This has a similar northern aspect to Kaimaumau with a dominance of *Tucetona laticostata* - there were some pairs, but not in good condition, however I did get a nicely marked pair of *Purpurocardia purpurata*. Next morning was sunny again so we drove north to Tokerau Beach. (Houses everywhere now.) Five years ago there were lots of *Zenatia acinaces*, but only a few this visit. However I did get a very large *Cirsotrema zelebori* in fine condition amongst the rocks at the end of the beach. Leita found others at about half-tide on the sand. A couple of half grown pairs of *Pecten novaezelandiae* completed our collecting there.

It was time to head south again. At Taipa we tried the beach at Cable Bay. It looks to be a good fishing beach with rocks to deep water, and

nice rock pools too, but we found little shell life in them. On to Mangonui and toasted sandwiches again. The chef recognised us and even remembered the filling we had ordered!

We were keen to fit in a trip to Little Taupiri Bay, so we went on through Paihia, across on the car ferry, east along Russell Road and round through Manawaora to the little track leading down to the beach. In anticipation of shell sand we were armed with plastic bags so imagine our disappointment to find NO shell sand on the tide line, only chunks of pumice and a few skungy limpets! However we persisted and I found a nice little *Trivia merces*. I made my way across to Leita to show her and stumbled on a shell I had never seen before! A very colourful specimen of *Pictobalcis articulata*! That made my day, all that long winding road was worthwhile. It was now almost dark so we took the direct route through Russell Forest to stay at Kawakawa for the night.

It was thick fog when we left in the morning, but as we travelled south the low cloud gradually cleared and the sun shone. We skirted Whangarei and at Warkworth headed for Sandspit. This time we went to Brick Bay - a recommended spot. The tide was well out and we picked up several species of *Epitonium* before heading south again. We got through the Auckland traffic during a lull in the mid-afternoon - not that you would know it! This about wound up our shelling. It was back through Taranaki again as another southerly blasted the central North Island.

***Pictobalcis articulata* (G.B. Sowerby I, 1834)**

Cookia Contributions

Members and other readers are invited to submit contributions (handwritten, typed or electronic). These should be in the Editors' hands before the end of May for inclusion in that year's issue (look at a recent issue to see the style to follow).

Please use (unless there is a stated reason not to do so given in your manuscript) the molluscan names in the Checklist of the Recent Mollusca recorded from the New Zealand exclusive Economic Zone by Spencer, H.G., Willan R.C., Marshall B.A., and Murray T.J., which can be viewed at

http://www.molluscs.otago.ac.nz/index.html

Authors should also save the editors work by checking the spelling of these names very carefully. Following standard practice, in long lists of species the species names should NOT be listed in alphabetical order but in systematic sequence (with Family headings) as in the 'Checklist'. Bruce Marshall, at Te Papa Tongarewa Museum of New Zealand, is very willing to check identifications or species names for any members who would like his help. Please take advantage of this generous offer. Also note: the Mollusca Section library at Te Papa is the most comprehensive collection of world literature on Mollusca in the country.

The Editors are always happy to discuss any proposed contribution with members.

Shells (and Birds) in the High Country

by Bev Elliott

Lake Lilian is a perfect little gem in the South Island high country, beyond Lake Coleridge. My first visit there, in November 2003, was for the purpose of doing a Bird List for the OSNZ Atlas of Bird Distribution in New Zealand. Actually two lists, for the 10 km square line cut right through the middle of the lake. Lake Lilian East and Lake Lilian West were in two different 10 km squares, and nobody else had listed in either square, and most of the birds obligingly flew across the line to be recorded in both lists. It was a beautiful day and very successful, but I never gave shells a thought, so far from the sea.

Lake Lilian

Better go back and have another look at that beautiful spot, while the 70+ year old legs will still take me there. So on 12 December 2012 I set off again on that lengthy walk, 8 km each way. This time I took a tent, so I wouldn't have to come all the way back the same day. Things had changed along the way. River flats in fairly natural condition were becoming grassy paddocks surrounded by electric fences. Progress? - depends on your point of view, I guess. I could certainly do without the electric fences. How would I find a suitable campsite if I couldn't get past the electric fence to the Harper River? At last a gate gave access to the river, and I pitched my tent in the matagouri, and then set off to Lake Lilian without the heavy load. I hoped the lake would not be surrounded by electric fences. No, it was still natural and unfenced, but not very pretty on a grey cloudy evening. I was tired and disappointed as I trudged the 3 km back to my tent. In my pocket were a couple of scraps of *Echyridella menziesii*, just for the record. I couldn't be bothered trying to find a more presentable specimen, and it would be too far to come back in the morning.

After an almost peaceful night, disturbed only by one persistent possum, I woke to a perfect fine day. This was too good to miss; I'd have to go all the way back to Lake Lilian. It was certainly worth the effort, with the three snow-capped peaks of the Spurs reflected in its still blue waters. With photos taken, the next task was to find a couple of *Echyridella* specimens, which proved strangely difficult. By wading halfway to my knees, I found a number of live ones that were so badly eroded that I didn't want to kill a living animal for a very poor shell. While searching for *Echyridella* specimens, I realised there were *Potamopyrgus* shells present, the slender keeled variety that used to be called *P. salleana*. While collecting a few of these, I realised that some of the larger ones were actually *Glyptophysa variabilis* (the old eyes don't pick up the finer details like they used to) and while trying to collect a few specimens, I found that bleached dead ones were easier to spot than brown live ones, and then I found that among the little bleached things were a few *Sphaerium novaezelandiae*. And later I found that I also had one *Austropeplea tomentosa* in my little container. Five types of freshwater shells from one little lake. I was still having difficulty finding a presentable *Echyridella* specimen. But it was mid morning, getting hotter; time for a swim. Near the lake outlet, all accumulated in one spot about a metre deep, were all the dead *Echyridella* shells. I scraped up bundles of them, and spread them on the shore, to choose a few of the best ones.

Walking back to my tent, I met up with Dick and David, two fishermen

***Lymnaea stagnalis* (Linnaeus, 1758)**

who were doing things the easy way in a 4WD vehicle. They had been fishing at Lake Georgina, and told me there was a Crested Grebe there, carrying three babies on her back. While I've seen many Crested Grebes over the years, I've been totally unlucky at witnessing this strange bit of bird behaviour.

Later that day as I was walking back to my van at Lake Coleridge, there were numerous Black Fronted Terns hawking insects over the new farm paddocks. I took little notice of them until a flash of black caught my eye. Three terns were wheeling around together, and one of them was black - the first White Winged Black Tern I've spotted in 30+ years of bird watching. The others seemed not to approve of the dark stranger in their midst, and were trying to chase it away. By the time I'd put down my heavy pack, and had binoculars and camera ready, they'd all flown away. But then, to my delight, the black one came flying back alone, and I watched it for one to two minutes. What luck!

At Lake Georgina two days later, I walked right around the small lake, and soon spotted the Crested Grebe and her three babies. But they'd grown a bit since Dick and David had seen them a few days earlier, and were too big to ride on mother's back. Such strange looking youngsters, balls of pale grey fluff, each with a long snake-like neck and ugly little face, not at all like their handsome parents. I kept an eye open for *Echyridella* specimens, but saw no sign of them here; however the lake shore was littered with dozens of the introduced water snail, *Lymnaea stagnalis*. These are also found at Lake Lyndon and Lake Heron, but Lake Georgina's ones are the largest, best and most common ones I've seen.

Freshwater shells

Later in the month, December 28th, I was at another high country lake. You won't find Lake Irene by that name on any map, just a tiny nameless blue dot. 40 km inland from Hanmer is Lake Tennyson, and 3.5 km SW of Lake Tennyson is a 5826 ft mount marked by just the letter I, which I think of as "Irene". I first climbed it in December 2009, in rather horrible weather. I managed to get some reasonable photos during some of the clearer moments, but when I dropped down to the little lake, it was almost a white-out, with a howling gale. Looking for shells was <u>not</u> on the agenda at all! For three years Lake Irene was in the back of my mind, calm and beautiful, surrounded by alpine flowers, with a perfect view of 7550 ft Mt Una and the spectacular Spenser Range across the valley. On 26 October 2012 I tried again. But the wind was colossal. The Spenser Range was clear but grey, and Lake Irene was almost completely covered with snow. I got some great photos, but it wasn't quite what I'd dreamed of. So I was back again two months later for another, much more successful try. I walked right round the wee lake, enjoying the views, the flowers and the insects. And kept my eyes open for shells, which I wasn't expecting, away up here at 5400 ft. And I found a few *Austropeplea tomentosa*. I wonder, how high can you find shells, and how do they get away up here?

Lake Irene

Almost a month later I was again up in the high country, at the Klondyke Lakes, 4500 ft up above Rahu Saddle on the Lewis Pass Road. Here too, I looked carefully for shells, and found more *Austropeplea tomentosa*.

Other high country locations in my collection: *Austropeplea tomentosa* and *Glyptophysa variabilis* from 4400 ft, Little Lake Sylvester, Cobb, Nelson, December 1968.

Hubs, Huber ... Hubris?

by Pat Lakeman

A central point of interest to shell collectors is New Zealand's online Checklist of Recent Mollusca, and its highly valued efforts to maintain a record of the most recent systematic naming of NZ mollusca. *Cookia* has reported before on what a valuable and possibly unique resource this is for anyone with an interest in NZ shells. For many shell collectors, it is an important part of our interest to keep tabs on what the specialists consider to be the correct names for shells, even if not all of us want to grapple with the underlying science.

Another point of interest is created by a publication that documents and illustrates a very large number of the world's bivalves. So when Markus Huber's *Compendium of Bivalves* was published in 2010, and subsequently the Checklist incorporated dozens of changes to the nomenclature of NZ bivalves, acquiring "Huber" for our club library was a priority. From arrival it was eagerly sought after by members who took turns to borrow it and pore over it and possibly improve their muscle strength by carrying it around. For it is a massive work: about 3.5 kilograms in weight, 901 pages, colour illustrations of some 3,300 species, a listing (on CD) of some 6250 species, and extensive comments (and, despite all that, with ten families to come in a "following edition"). A major shortcoming is that it does not contain an index, but it is an admirable achievement to produce such a work with worldwide coverage. In such a context it is not surprising to find Section 6 ('Special Remarks' – about 275 pages) of the book proposing a large number of taxonomic changes. Nor to find that a number of these changes affect our NZ bivalve fauna.

As clearly stated in its introduction, the Checklist is a compilation, and its editors must remain objective - incorporating the latest published taxonomy, even though they may not always agree with it and may expect further changes with future research. So, in the process of keeping the Checklist updated, Huber's taxonomic changes were incorporated. But in early 2013, Bruce Marshall and Hamish Spencer caused a number of these changes to be reversed when they published their comments on some of the changes Huber had introduced.

Marshall and Spencer accepted most of Huber's changes but they considered that a significant number had been made with inadequate justification. I don't propose to examine the individual changes or reversals here, but I would like to recommend that at least the Introduction and Discussion sections of the Marshall and Spencer paper make excellent reading for all shell collectors, not least those whose shoulders droop a bit when name changes affect our shells. These sections summarise a sound approach to molluscan taxonomy based on three factors: the large amount of molecular data that is increasingly available (and is especially helpful where traditional use of shell and anatomical differences have failed to resolve taxonomic relationships); the fact that morphological variation within a species is as important as apparent variations between species; and the repeated finding that closely related species are found in relative geographical proximity and many (though not all) genera are less widely distributed than previously supposed.

It is clear that many of the reasons for taxonomic changes in Huber's book are not supported by objective evidence; and more consultation could have averted the need for rework. In a work the size of Huber's it is probably impossible to "get it all right" – but the book is subtitled "A Status on Bivalvia after 250 years of Research" so it leads me to expect a lot. Rather than presumption, a conservative approach to taxonomic change is needed, particularly for a tome that by its very nature is likely to have a lot of influence.

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A Little About Carl Linnaeus

by Fred Keil

Having read and written the name Linnaeus countless times I decided to go on-line and find out about this gentleman. The following are some interesting snippets about him and his life.

He was born on 23 May 1707 in Råshult, southern Sweden and was named Carl Linnæus (this is not a spelling mistake but the way he himself wrote it). His name also appears (not always correctly) as Linneus, Linné, Linne or just L. After his enoblement in 1761 he was called Carl von Linné. When using his name as the author of a species, Linnaeus followed by the year - eg Linnaeus, 1758 - is the best choice.

During his school years, studying Greek, Hebrew, theology and mathematics, and attending gymnasium, Linnaeus wanted only to study medicine, to which botany then belonged. His father was told that Carl would never become a scholar! But one of his teachers discerned his aptitudes, and the young Linnaeus began his remarkable career.

He was multi-talented: a physician, zoologist, ecologist, but first and foremost a botanist. He came to be known as "the father of taxonomy", taxonomy being the science of identifying, naming and classifying organisms (plants, animals, bacteria, fungi, etc). Linnaeus is responsible for the binomial system we still use today, whereby each species is given a genus name followed by a specific name (species), with both names being in Latin.

Of his many publications, *Species plantarum* (1753), *Genera plantarum* 5th ed. (1754), and *Systema naturae*, 10th ed. (1758) have been internationally accepted as the official starting points for botanical and zoological nomenclature. The last of those three classified 4,400 species of animals and 7,700 species of plants, and it should ring a loud bell with all of you - the date of the book was used to establish all the species he described.

Linnaeus died after suffering strokes, first in 1774 and the last in 1778. In this time he became paralysed on one side, and although he was still able to admire his own writings he could not recognise himself as the author.

In 1783 his wife Sara sold Linnaeus' scientific belongings to James Edward Smith, who became an eminent botanist and founded The Linnean Society of London in 1788. The collection contained 14,000 plants, 3,198 insects, 1,564 shells, 3,000 letters and 1,600 books.

Carl von Linné in 1775.
Oil painting by Alexander Roslin.
Royal Academy of Science, Stockholm.

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Wellington Shell Club Publications

Cookia is the journal of the Wellington Shell Club and is published annually, containing articles and smaller items of interest on shells, shell collecting, and molluscs as well as other related marine topics.

Cookia was first published in 1976; prior to this the Club published a *Circular*, then a *Bulletin*, as well as occasional *Study Notes* on various families of mollusca.

PUBLICATIONS TO DATE

1956-1965 *Circular* 1 to 21

1967-1975 *Bulletin* 1 to 36

1976-1977 *Cookia* Volume 1, Nos 1, 2, 3

1977-1978 *Cookia* Volume 2, Nos 1, 2, 3

1979-1980 *Cookia* Volume 3, Nos 1, 2, 3

1980-1981 *Cookia* Volume 4, Nos 1, 2, 3

1982-1984 *Cookia* Volume 5, Nos 1, 2, 3, 4

1985-1992 *Cookia* Volume 6, Nos 1, 2, 3, 4

1993-1996 *Cookia* Volume 7, Nos 1, 2, 3, 4 [Index]

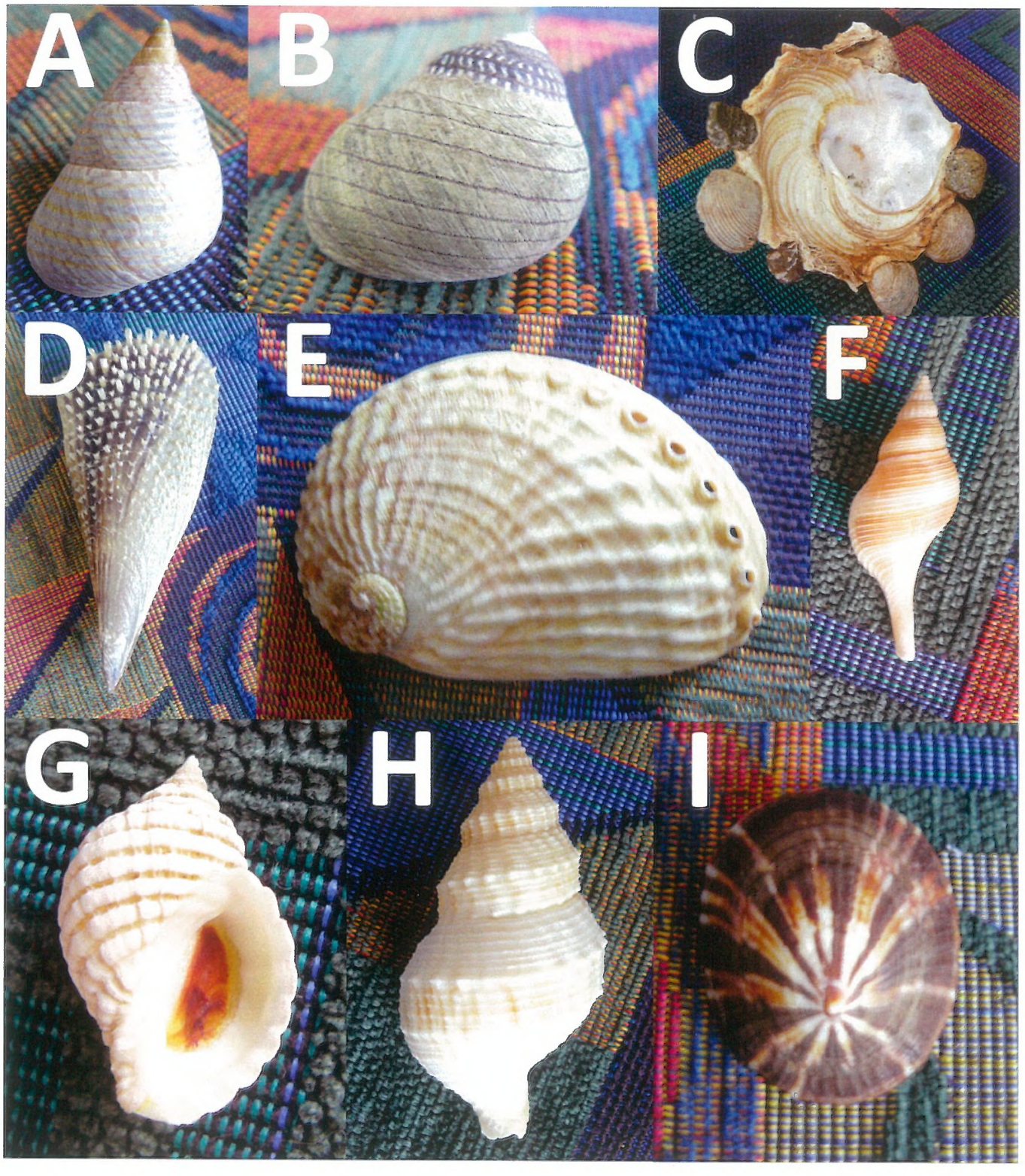
1997-2012 *Cookia* Volumes 8 - 24.

Cookia Volume 7, No 4, is an index of all articles in the Club publications to 1996.

Cookia Volume 14 is The Shell Lists issue.

BACK ISSUES

Back issues of *Cookia* are available at cost plus postage; individual articles, and copies of the Bulletins, Circulars and Study Notes can be ordered at cost plus postage, from Jill Burnet, 84 Brougham Street, Mt Victoria, Wellington 6011 New Zealand; or see our homepage at **www.wellingtonshellclub.org.nz**



The solution:

A: *Cantharidus opalus*, 30mm, Marfells Beach, Marlborough. B: *Diloma aethiops*, 16mm, Lyall Bay, Wellington. C: *Xenophora neozelanica*, 64mm, Trawled off Raglan, Auckland. D: *Atrina zelandica*, 155mm, Mistletoe Bay, Marlborough Sounds. E: *Haliotis australis*, 81mm, Owenga, Chatham Islands. F: *Aeneator otagoensis*, 50mm, dredged, Marlborough Sounds. G: *Haustrum lacunosum*, 22mm, Porpoise Bay, Southland. H: *Austrofusus glans*, 59mm, trawled off Otago. I: *Cellana stellifera*, 26mm, Little Taupiri Bay, Northland.